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ON
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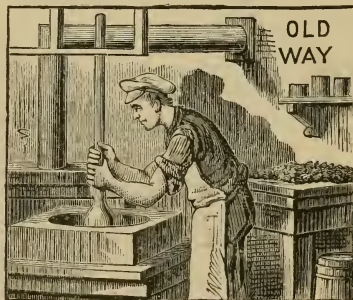
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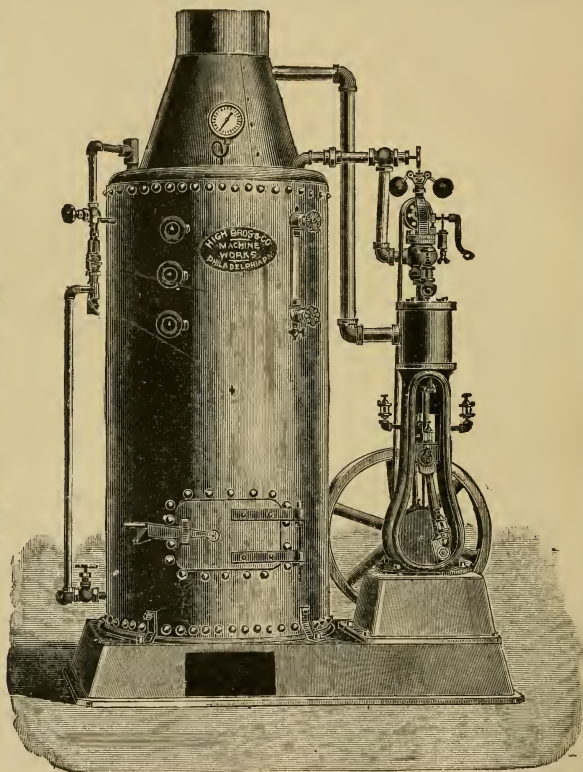


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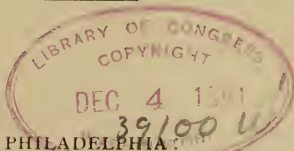
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PREFACE.

In offering this book to the manufacturers of American Confections I will endeavor to avoid the common practice of writers (in filling a large volume with ancient ideas, theories and receipts). I hope by the appearance of this little volume to set forth some plain facts in as few words as possible. Some of the theories are new, yet very true. The object I have in view is plain and can be readily defined. After 25 years of experience in long and careful experiments of no small importance and value, I feel competent to undertake the important task of coming before the confectioners of the present age. In the pages of this book I have given a detailed statement of many points which I have discovered to be of benefit to the art of confectionery, and have endeavored to bring the main points within the grasp of all who will read carefully and practice in the art. My theories are well fixed by practical experiments and by the evidence of accomplished facts. It

is of interest not only to a few, but to the many who may be interested in the manufacturing of confections, ice cream, and soda water. The importance this little work has over many other much larger books can be readily seen and found safe to follow all instruction, as it is laid down in here. I have avoided recommending expensive machinery and impossibilities for small factories, have kept economy in view when it is really necessary for prosperity. I hope we are all fully aware of the importance of keeping abreast of these progressive times, and by holding a key to scientific and practical experimental knowledge, we have the lead of advancing times in being able to force the way into the future art of confectionery, and by giving my best experience as I have found it will benefit those of my fellow craftsman to obtain higher advantages in the art, and educate the younger workman, I have accomplished one of my main objects in giving this little work of simple and plain facts to the trade.

INTRODUCTION.

If I were to give proof of theories and reasons why I hold views as it is laid down in this book, I would be obliged to fill a much larger volume of arguments of no real value to the reader, I simply ask those who wish truth of correctness to try the theories with practice, and they will be convinced of the advantage over customary methods which are in use in the confectionery business, further reference to the reliability of the notes before us is really not necessary.

But it is absolutely essential that we follow the instruction carefully if we would be successful. Too few of us think it necessary to put into practice simple facts, but go on in our old way without improving our work, when we might have guides to put us on our way and indicate the course that must be pursued to accomplish anything like success in the confectionery business.

NOTES ON CANDY.

Hints on Cream (or Fondant).

We will commence our remarks by taking up the subject of Cream, as cream is one of the most important features in the candy business, and when you have a good cream you can make good candy if properly handled. We ought to give this special branch a special study, and in the following hints we will try to give our experience as we see it. As cream is made many ways, and is used for many different purposes, it would be well for us to understand more fully the different effects of alkalines on sugar.

Effect of Alkalines on Sugar.

Cream Tartar will act on the grain of sugar after it is made into cream longer than any other alkaline, as you will notice that a bon-bon made from cream in which cream tartar has been used will continue to get mellow for some time after it is made up, and cream that glucose has been used in will commence to dry out soon after it is made up, if it is exposed to the air. Yet there is such a thing as using too

much cream tartar, which will kill the grain of sugar, one teaspoonful of cream tartar to 10 pounds of sugar is sufficient to make a good cream. In cases where you want the cream to work longer before sitting, use a little glucose with the cream tartar. By using acetic acid there is less change takes place in a longer period of time than any other alkaline that is used, and acts as a preserver to some extent.

Change of the Grain of Sugar.

This is a very special point I wish to call your attention to, as it is necessary to understand this thoroughly. Sugar is continually undergoing a change after it is made up into cream, and it is not best to have much cream on hand, as fresh cream is best for all purposes. After cream has been turned and laid long enough to mellow up, and is cooled off, it is ready for use, and it is what we may call live cream.

Live Cream.

I call it live cream because the grain (although very fine) is fresh and has not lost its strength as you will notice when you use it for such work as cream wafers (which are dropped on paper), they will keep fresh for a long time without crystallizing, and will continue to get a little mellow and will keep mellow, and will keep clear of white spots, which is a point that seems to trouble confectioners very much, and you will notice the same effect in

dipping Easter eggs, and in dipping bon-bons of all kinds; and here we may say that it is best not to kill your sugar too much for dipping purposes by using too much alkaline.

Dead Cream.

Dead cream is what I call cream that has been on hand too long a time and has worked itself to death, and when you use it you find it does not get mellow as it should do, it will work like a batch that has been cooking too long a time, will not stand, gets a little runny and you have to heat it up hotter to make it sit, and when it commences to get old and dry it gets hard all at once. If we could get cream workers to notice the above effect they would not have the trouble that they are always complaining of.

Different Alkalines for Different Purposes.

It is best to use different alkalines for different work, such work as cream for drops to be covered with chocolate, or with chopped nuts, or cream which you want to use for inside goods, you will find glucose cream will work best, as you can run it longer than cream tartar cream, which would be too dry and short for the same work, and some work you would require a dry cream that would set quick and stand crystallizing, it is best in such work to use cream tartar. The following is a good way of making cream for covering with chocolate:

Covering Cream.

Place 10 pounds of sugar in a pan and add one pound of glucose and enough water to dissolve the sugar so your thermometer will register 230 degrees when it begins to boil, then cook to 238 or 240 degrees and pour on clean marble and let lay till cool, then turn to a cream, leaving the cream in one lump at one end of the marble and turn a pan or tub up side down over the cream and leave it lay till it becomes mellow, then place it in a farina boiler, or a pan set over a pan of hot water on the fire and stir till it is dissolved, then run it out in the impressions in the starch, leave lay in the starch 1 or 2 hours, or till it is hard enough to handle, then take the creams out and place them in a sieve and dust the starch off and then cover with chocolate.

Dipping Cream.

Dipping cream made in the following way I find to be the best for general use: Place 8 pounds of Mold A sugar in a copper pan and add enough water to dissolve the sugar so your thermometer will register 230 degrees when it begins to boil, then add 8 oz. of glucose and cook to 238° or 239° and pour on a clean marble and leave lay till cool, then turn rapidly and leave, mellow up the same as in covering cream, and when it is cold it is ready for use; be sure and not use too much water in cooking so to make the cream runny, nor do not cook over to slow a fire. This cream you will find if used fresh

will keep well without crystallizing and will be a good cream for crystallizing also.

Acetic Acid Cream.

Acetic acid makes a good dipping cream for gloss and firmness, and is made by using one tablespoonful to 10 pounds of sugar and work it the same as the above.

Dipping Goods in Cream.

In dipping goods in cream the most particular point to find out is what cook of cream suits you best for stiffness, such as 239° or 240° , all thermometers varies a little, so you will have to get used to the one you have in use. Next be very careful in heating your cream, always use a farina boiler, a 3 pint boiler is plenty large enough, fill it half full of cream and stir the cream while it is heating, and when you want to test the heat of the cream stick your finger in the cream and in this way you will soon be able to know what heat of cream works best and keeps best. When you have partly used the cream by dipping add a little fresh cream and in this way your cream will work better and more regular; next use care in the goods you select for dipping, cherries, jellies and sour fruits hardens the cream very soon, use mellow goods such as fresh marshmallows and cream goods, almond paste, and dip all nuts the second time, dip them very thin the first time, then in thicker cream the second time.

Con Serve Cream.

Con Serve cream is made by cooking up a batch of sugar and stirring a quantity of turned cream in the batch to start it to cream or turn, say take 10 pounds of sugar, $1\frac{1}{2}$ pounds of glucose and $\frac{1}{2}$ gallon of water and cook to 238 degrees, then stir 6 pounds of turned cream into the batch and add flavor and run in impressions in starch, and as soon as they are cold cover with chocolate, and in a couple of days they will mellow up and be quite creamy and soft. For making goods to be crystallized, cook to 243 degrees, this style of cream is mostly used in large factories where they want to make time. We would advise turned cream on the marble for all purposes, and made fresh often.

Cocoanut Cream.

For all cocoanut cream candies it is best to make a cocoanut cream batch, as it will be more regular in your work than if you would simply add cocoanut to a plain cream as is commonly done by most workmen. The following way makes a good cream: take 20 pounds of sugar and 2 pounds of glucose, 3 quarts of water and place all in a copper pan and cook to 244 degrees, then pour on marble, and when almost cold add 5 cocoanuts, grated fine, then turn to a cream and cover it over with a pan or tub and leave lay till mellow, then need well and it is ready for use for running in starch, in bon-bons.

and for drops for covering with chocolate, and dipping in cream. If you want to reduce the cream for making a soft drop for covering with chocolate, add a little simple syrup to the melted cream.

Chocolate Cream.

We would recommend chocolate cream to be made on the marble instead of adding chocolate to plain cream, because you will have your batch more regular in flavor and moister and well worked, which is important in chocolate cream. The following is a good way of doing it: Place 10 pounds of sugar in a pan and 1 pound of glucose and 3 pints of water and cook to 233 degrees, then pour on the marble and when cold add 2½ pounds of plain liquor chocolate (melted), then turn to a cream and leave, mellow up the same as cocoanut cream, when it will be ready for use for running in starch, or by adding butter you can use the above chocolate cream for Italian Creams or Genesees or St. Nicholas by using it in the following way:

Genesees or Italian Creams.

Take 5 pounds of the above chocolate cream and place it in a farina boiler and warm up well and add ½ pound of good butter, and one vanilla bean, and mix all well together and pour on heavy wax paper laid on the marble, between iron rods in a mass about ¾ inch thick, leave lay over night or

till thoroughly cold, then cut in squares like caramels and it is ready for use, or by leaving the squares lay till they are somewhat dry you can crystallize them in a crystal cooked to 35 degrees on syrup gauge, or 224° on the thermometer.

Saint Nicholas Creams.

St. Nicholas creams can be made out of the above Genesees paste by adding a little simple syrup to the cream when you have it melted, so as to thin it so you can run it in starch (use a large spoon to add the syrup so you will not get the cream to thin by adding to much at one time), leave the creams lay in the starch till they are hard enough to handle, then take them out and dust them off and cover in chocolate coating, have your coating a little stiff or cold so as to make them cover roughly or rugged like small horns sticking out all over the stick or drop, and lay on wax paper till they are cold, when they will be ready for use.

The above creams make a very nice candy to crystallize by leaving them lay in the starch till they are dry enough to stand the crystal.

Almond Paste Cream.

Almond paste cream for hand work or for running in starch or cutting out with lozenge cutter or for dipping, can be made in the following way, which I find will keep in warm weather without

souring or swelling up and cracking open. Take 8 pounds of sugar and 2 pounds of glucose and 1 quart of water, and place in a copper pan and cook to 260 degrees, then remove from the fire and add 5 pounds of (Henry Heide's) prepared almond paste (cut in fine slices) and set the pan on the fire again long enough to let it come to a boil, then pour on the marble and when partly cool add one ounce of glycerine, and then turn rapidly to a cream (be careful not to let it get to cold around the sides before you start to turn it, as it will get very hard, being a very high cook), then cover up the cream the same as described in covering cream and after you have needed it well it is ready for use for hand work, such as almond paste cherries, almond paste scollops, etc. For dipping roll out in sheet and cut out different style of drops with a lozenge cutter, and dip in cream for running in starch, place one pound of the paste in a farina boiler and add one pound of plain cream and warm all together and add a little water to thin it enough to run, then add flavor, such as lemon or orange or vanilla and run in starch, and after the drops are cold they can be dipped in cream or covered in chocolate or crystallized.

Do not pass over these points on cream carelessly if you become enlightened on this subject of cream through this book, it will accomplish more than any other book in print. There are large houses doing business here in eastern cities who have goods returned from far west and south that have become

stale before they were received by the buyer, simply because they spoiled the goods in making.

How to Handle Starch Work.

For the benefit of those who are not accustomed to starch work I would like to give a few simple directions for working in a small way: first have 10 wooden trays made, size 32 inches long, 16 inches wide, 1 inch deep, with blocks on corners for feet, then have a starch trough made, 6 feet long, 2 feet wide, 1 foot deep, with high back and ends, set this trough on legs, then place one of your trays in the trough at a time and fill with starch (have a regular molding starch), after you have the tray full of starch use a wire egg whip to loosen the starch up with, then stroke the board off level with a round stick, now place the tray on a table and make impressions with plaster or wooden molds, set on a stick so as to reach across the board, now have cream runners or funnels of different sizes of holes, say $\frac{3}{8}$ of inch and $\frac{1}{2}$ inch, now melt the cream and flavor and fill your runner and hold it by the handle in the left hand and swing it from the other side with the little finger of the right hand, now catch the stick (which closes the holes in the funnel) with the thumb and first finger of the right hand, now commence running the stick up and down and drop the cream in the impressions in the starch. You may find it very awkward at first, but with practice you will be able to run rapidly in a

short time. I have often had some very clumsy workmen make good runners in a few days. After your goods are hard enough to handle set your trays in the starch trough, and take the drops out with a wire scoop and have a large sieve in one end of the trough on cross bars, now throw the drops in the sieve and take a brush and dust the starch off the drops, when they will be ready for dipping in cream or covering in chocolate or crystallizing. While your starch is new it will be troublesome to make good impressions, but after working for a few days it will work better, if convenient you had better put your starch in a dry room to dry out before using.

How to Handle Chocolate for Covering Goods.

First I would advise all who do not manufacture chocolate from the Cocoa bean, to use chocolate coating which is ready mixed, as it is sold so close in price that there is nothing to be saved by mixing the coating yourself, and you can get it much regular in quality by buying a regular grade ready mixed.

Chocolate Marble.

For coating cream goods, etc., have a marble about 5 feet long, 3 feet wide, and 3 inches thick, and set it on a wooden frame 2 feet and 2 inches high, and heat one end of the marble by placing a small gas stove under it or a small coil of steam pipe,

then place 10 or 15 pounds of chocolate coating on the warm end of the marble and move it around till the chocolate is melted, then regulate the heat of the stove or steam so as not to get the marble too hot, then scrape the melted chocolate over to the cool end of the marble, then work the chocolate with a palate knife so as to cool it and get it regular in temperature; now seat yourself in front of the marble, then scrape a small quantity of the chocolate to the front of the marble and coat your goods with a two prong fork and lay them on heavy wax paper (which can be laid on tin sheets 12 inches by 14 inches in size), then place the tins of chocolates in a cool place; if in cold weather you can set them near an open window till they are cold and hard; if the goods have gray streaks over them or gray bottoms the chocolate is too warm that you are covering them with or the weather is not cold enough to dry them fast enough, in such a case you can place your goods in a refrigerator that is well iced, and when they are dry take them out and pack them in boxes. If they are left to remain in the refrigerator too long after they are dry they will sweat and spoil the gloss on the goods.

How to cover Chocolate Goods with Streaks over Top

Goods with an oval or flat top can be covered in the following way: Drop one of the drops in the chocolate and pull the chocolate up over the

top of the drops with a fork, and then run the fork under the bottom of the drop, then shake the fork and strike bottom on the marble so as to run the chocolate smooth on top, now hold the fork in the right hand and slide the drops off (on the wax paper) of the fork with the first finger of the left hand, bringing the finger up over the top of the drop, leaving a streak on the goods.

Round Chocolates with Streaks.

Round goods can be coated with the hand by rolling the drop in the chocolate so as to cover it, then pick the drops up with the thumb and middle finger, and balance it on the middle finger, shaking it at the same time so as to get it smooth and drop it on wax paper and bring the finger up over the drop so as to leave one streak. After practicing this way of dropping the drop, you can make time and can have your goods smooth with only one mark on the goods, which will be the streak, if the weather is very cold you will have to keep the marble a little warm all over so the chocolate will not chill to soon to work smooth.

Chocolates with Curl on Top.

Round goods with a curl or ring on top can be coated in the following way: First add a little more fine lozenge sugar to the chocolate to stiffen it or make it stand up better, work the chocolate well so as to get the sugar well worked through, now coat your drop with the hand and run the

finger around the top of the drop leaving a curl or ring coming up to a point.

How to keep Chocolate Goods during Warm Weather.

All chocolate goods ought to be kept in a cool dry place during warm weather, not in a refrigerator or ice vault, as that would be too cold for the goods, as they would sweat when they would be brought into the store for sale, and to keep them in a moist place they will get moldy. A cool dry cellar is the proper place to keep all chocolate goods during warm weather. The best way is to have very few chocolate goods on hand during warm weather. By making small quantities on the plan described in small batches of cream goods, your goods will give the best satisfaction.

Farina Boiler for Chocolate Work.

The farina boiler is found very serviceable for chocolate work to keep a supply of melted chocolate on hand, especially where you are using large quantities in a day. Have a 3 or 4 gallon farina boiler made out of heavy block tin and then partly fill the bottom pan with water, then break up some chocolate coating and fill the top pan with the coating and set in the water, and set on a fire to melt, and when melted you can dip the chocolate out on the marble as you want to use it, you will find this a good way of working in the summer time when you do not want to heat up the marble.

List of Chocolate Goods for Retail Store.

The following list of goods will make a nice retail stock, as some of the flavors can be used in two grades of goods.

Chocolate covered French Cherries (plain).

- | | | |
|---|---|---|
| " | " | Grenoble half Walnuts (plain). |
| " | " | Almond Nougateens. |
| " | " | Apricot Jellies. |
| " | " | Vanilla Cream Drops. |
| " | " | Vanilla Cream Drops with Walnuts on top. |
| " | " | Vanilla Cream Drops with Pecan on top. |
| " | " | Orange Cream Drops. |
| " | " | Orange Cream Drops with Walnuts on top. |
| " | " | Almond Paste Drops with split Almond on top. |
| " | " | Cocoanut Cream Drops. |
| " | " | Cocoanut Cream Drops with grated Lemon Rind. |
| " | " | Raspberry Cream Drops flavored with
Raspberry Jam. |
| " | " | Strawberry Cream Drops flavored with
Strawberry Jam. |
| " | " | St. Nicholas (long). |
| " | " | St. Nicholas (cresent shape). |
| " | " | French Nougat. |
| " | " | Cream Nougat. |
| " | " | Caramels. |
| " | " | Genesee Squares. |
| " | " | Jim Crows. |
| " | " | Praline Chocolates. |
| " | " | Marshmallows. |

Chocolate Wafers—large and small.

Frosted Opera Wafers.

Notes on Chocolates.

Do not cover cream cherries or cream walnuts with chocolate, as the cream around the cherries or walnut will soon get very hard, cover them plain. Caramels covered with chocolate should be extra rich and very soft, a thin piece of caramel rolled round like a lead pencil, and about $2\frac{1}{2}$ inches long, and covered with chocolate makes a nice piece to lay on top of a box of mixtures.

For St. Nicholas, make a chocolate cream the same as for Genesees or Italian Creams as described in hints on cream, and run the cream in starch long and crescent shape. Jim Crows are made by mixing chopped roasted almonds and sweet chocolate together, and add more sugar to stiffen the paste and roll out in little sticks about $1\frac{1}{2}$ inches long, and lay on wax paper and cool off the same as cream chocolate. Praline chocolates are made by grinding roasted almonds to a smooth paste and mixing with sweet chocolate and fine sugar, and rolled in balls and covered in chocolate coating. $\frac{1}{4}$ and $\frac{1}{2}$ pound boxes of chocolate wafers put up in neat boxes and tied with ribbon makes a very saleable package. Also $\frac{1}{4}$ and $\frac{1}{2}$ boxes of covered caramels is a good package for rapid selling. All chocolate goods ought to be covered fresh as often as possible, as chocolate will become a little dull during changeable weather. You can keep almond nougateens, roasted almonds, marshmallows, and French nougat and all hard goods in tin cans and

cover a few of them fresh as you want to use them, in this way you can always have a bright fresh looking stock of goods.

Roasted or Burnt Nuts.

Jordan roasted almonds, burnt almonds, burnt peanuts, are a line of candies which is found in every confectionery in the United States, yet we find very few that are nice or fit for any use, mostly they are hard, dried out like a rock, faded or sticky, especially in warm weather. Now they should all be crisp, bright in color and dry, not loaded down with sugar in large lumps. If the following direction is followed carefully we can have goods that will keep for a long time even in bad weather, and will be eatable and saleable. First have a *sheet iron roaster* made in a cylinder shape (like one joint of a stove pipe) 12 inches in diameter, close both ends with sheet iron, having small holes punched in the ends to leave the steam and smoke escape, leave a door in the side and run an iron rod $\frac{1}{2}$ inch thick through the cylinder for a bearing, and place a crank on one end of the rod to turn it with; have a sheet iron frame to rest it on, make the frame with sides and ends, leaving the top and bottom open. Now put 5 pounds of almonds in the roaster and set it on the candy furnace and turn the roaster till the nuts are slightly roasted, then remove from the fire and continue to turn the roaster for a few minutes, as the almonds

will have heat enough to finish roasting them, turn them out in a sieve and cover them to keep them warm; now have 10 pounds of sugar cooked to a good syrup and colored a deep red, then take a copper pan and put one pint dipper full of the syrup in the pan and cook to a good crack; now add vanilla flavor and 2 ounces of plain chocolate (which you have shaved fine) and stir through the sugar quickly, then throw the almonds in and stir rapidly till the sugar is slightly turned, then take the pan from the fire and set it on the top of an open barrel in a sloping shape and continue to run your paddle under the almonds, and throw them up on the side of the pan and let them fall back to the bottom of the pan till they are turned enough to separate. Avoid stirring as much as possible, as too much stirring makes the almonds sugary and gray. Now when they have fully turned, throw them out into a sieve, then place the pan on the fire and add more syrup, (do not add too much syrup at each cook, as the almonds will stick together) and cook the same way, and add the almonds on the fire the same way, not forgetting to add 2 ounces of chocolate each cook) if you have not used too much syrup at each cook, there will not be any loose sugar come off of the almonds, but will be crisp and a bright color). When you have got the almonds large enough to suit you, take a clean copper pan and add enough thick melted gum arabic to coat your batch of almonds, and warm your gum up over the fire, then add the almonds and set the pan on the

fire one minute, stirring rapidly, then throw them out on the marble, and when they are cold they should be quite dry if your gum was thick enough, which is one of the main points, as thin gum will wash them and soak into the sugar and leave the almonds dull. After they are thoroughly dry, put them in tin cans or buckets and keep them till you want to use them. In the summer time you can use a little shellac after the gum is dry so as to keep them much better. In cold weather half gum and half glucose made hot makes a good coating.

I recommend the sheet iron roaster, as you can get a good, regular roast on the almonds, and I think it an improvement over the old way of roasting in sugar. A good Jordan roasted almonds ought not to be very heavy coated, $1\frac{1}{2}$ pounds of sugar to 1 pound of almonds make a good almond. Burnt almonds can be heavier, say 1 pound of valencia almonds to 2 pounds of sugar.

Burnt Peanuts

may be worked different, especially during dry, cool weather, by taking 5 pounds of peanuts and roast them in the roaster to a light brown color, then throw in a sieve and rub the thin shell or skin off of the nut, then place 3 pounds of sugar and one pint of water in a copper pan and cook to a crack, then remove from the fire and throw the peanuts into the sugar and stir rapidly till the sugar turns, then place the pan on the fire and stir the peanuts

till the sugar melts sufficient to make the peanuts glossy, then turn them out on the marble and spread out to cool off, then separate a little and put in tin buckets with lid on and keep them till you wish to use them.

Cocoanut Candies.

Under the head of cocoannt candies we will be obliged to bring our remarks down to a few points, as cocoanut covers such an extensive scope in the candy business.

First, we would like to call confectioners attention to desiccated cocoanut, as there seems to be some prejudices against the use of it, and for that reason I think it proper to give you my views on it. I would say I can recommend the use of it in the candy business, first, because it is so handy for ready use, and if you have a good quality which is made from good selected nuts which simply has the moisture evaporated from it, and still remains spungy and sweet, you will be of the same opinion after you become accustomed to using it, but if you have cocoauut that has been baked till it is as dry as a chip and has all kind of cocoanuts mixed together, you will soon become dissatisfied with the use of it. Then you will find it is as cheap as opening fresh cocoanuts, owing to the losses in spoiled cocoanuts.

I recommend the use of it for all purposes, and the only difference you will find between it and the fresh, is, it has lost its moisture, but, it being of a

oily or buttery nature it retains its flavor, and by adding it to a batch of sugar before the batch is cooked too high, it will become moist and will cook up like fresh cocoanut, or if you want to add some to a cream batch, and you want moist cocoanut you can simply put the cocoanut into a pan and dip your hand in water and work through the cocoanut till you have it slightly dampened, then let it sit a few minutes, and it will become just moist enough for proper use, and when you want to use it for high cooked candies, it will work better than fresh cocoanut.

Now I cannot recommend all desiccated cocoanut, as there is a great deal of adulterated cocoanut on the market, full of starch and other substance which will spoil most any thing you put it in.

Soft Cocoanut Candies.

The following formula will work satisfactory for soft cocoanut goods: Place 8 pounds of sugar in a copper pan and add $\frac{1}{2}$ gallon of water and 12 pounds of glucose, and place pan on the fire and let come to a boil, and when the sugar is thoroughly dissolved add 10 pounds of No. 1 desiccated cocoanut and cook all to a soft ball (stiring all the time), then add flavor of lemon or vanilla and remove the pan from the fire, and when the batch is partly cool it can be used for soft cocoanut or cocoanut steeples or cocoanut balls for dipping in cream, or by cooking the same batch a little higher

it can be used for Jap cocoanut by spreading out on the marble, and roll out in a sheet $\frac{1}{2}$ inch thick, and when cold cut in squares, and roll in granulated sugar when it is ready for use. For soft molasses cocoanut, take one gallon of molasses and 5 pounds of glucose, and add 6 pounds of desiccated cocoanut and cook to a soft ball. For maple cocoanut cook the same batch a little higher and spread out thin on the marble and cut in 5 cent pieces, or you can make molasses Jap or cocoanut strip out of it by working in the same as the above batch.

High Cooked Cocoanut.

High cooked cocoanut candies such as roasted cocoanut, take 8 pounds of white sugar and place it in a copper pan, and add 4 pounds of glucose and 3 pints of water, and cook to 310 degrees, then remove from fire and add 8 pounds of long shredded cocoanut and a little oil of lemon, and scrape out on marble and shape up in a batch about 2 inches thick and cut in $\frac{1}{2}$ pound bars.

Butter Cocoanut.

Butter cocoanut can be made by placing 6 pounds of sugar in a copper pan, and add 3 pounds of glucose and cook to 310°, and add 1 pound of butter and 3 pounds of shredded cocoanut and spread out on marble in a thin sheet, and cut in small squares with a horehound cutter, and when cold it is ready for use.

Soft Candies.

In soft candies our remarks will be brought down to one particular point, that is to avoid getting soft goods a little beyond the soft point, when it is neither soft nor crisp, but tough and anything but good, by using care in this one point is the most necessary thing to do to get good saleable goods. For caramels and soft cocoanut goods, etc., it is best to set your batch off the fire till you have thoroughly tried the batch by spreading a little of the candy on a cold marble, and let it get cold, so you can know just where you are, and for soft molasses candies, such as soft yellow jack or soft molasses walnut candy, always use a thermometer and cook to 261 or 262 degrees. You may think this is very soft for pulling, but if you pull the batch till it is thoroughly cold, it will be light, spongy and soft, just nice for good eating. Some may prefer crisp molasses candies, but those who want soft goods, it will not do to give them tough goods. One more point is to use enough glucose to enable you to thoroughly stir your batches and stand a low cook without turning, and enough glucose to allow you to add plenty of nuts in nut batches, and at the same time you can use more cream or butter to richen the batch which the glucose has reduced in richness, for example we will take caramels.

Caramels.

Take 12 pounds of sugar and 8 pounds of glucose and 12 quarts of rich cream, $\frac{1}{2}$ pound of butter. Place the sugar and glucose in a copper pan, and one quart of cream, and cook till the batch gets a little thick, then add 2 quarts more of cream and cook till it thickens, and continue in this way till you have added all the cream, then add the butter and continue cooking and stirring till you have the batch to the stiffness you wish it, which you can find out by removing your batch from the fire and spread a little very thin on a cold marble with a knife, and when thoroughly cold try it, and if hard enough to suit you, then pour the batch on marble between $\frac{1}{2}$ inch iron rods and when quite cold cut it and wrap in wax paper, or if you wish to use them unwrapped you can use 4 ounces of paraffine to a 20 pound batch which will dry them off a little so you can handle them better. For greasing the marble for caramels and taffies it is best to use cocoa butter, as it will not taste on the goods.

Hard Candy.

Hard. or clear candy comes into the general stock in the candy business more than any other line of goods, and for this reason we may watch it a little closer. There are two points we are always trying to obtain, that is to have our goods dry and

brightness in color, our great difficulty is to get the right cook and the amount of cream tartar or glucose to use so as to have the above effect. First we find that by using enough cream tartar to keep the goods from turning they will become sticky and with too much cream tartar they will darken in color when you get an extra high cook on, and we find the same trouble with using glucose, and yet I find by using a very small quantity of glucose it will not color the high cook batch as much as cream tartar will, and will remain a little dryer. One more important point we might mention here is to be careful about throwing too much water into a batch of sugar which alone will spoil the candy if you have your batch drowned to start with. Then the fire comes next. A slow fire will simmer or stew a batch and spoil it before you have it cooked, and again a very quick fire and small allowance of water will turn out your batch too dry or a little grainy unless you have a large quantity of glucose or cream tartar in it. So we find we need care all around to have our work satisfactory. In the following directions I will try to give you the right course to follow in clear candies.

Lime Drops.

I choose lime drops for an example, as there is more trouble to get a good color on them than any other drop. I find that the following will be just right if you do everything just so.

Take 20 pounds of Mold A sugar and place it in a clean copper pan and add $\frac{1}{2}$ pound of glucose, then add enough water to dissolve the sugar so your thermometer will register 230 degrees. When the batch begins to boil have a good fire and cook to 336 degrees. Now pour out on the marble slab and add a little blue color, and when it has cooled a little add $4\frac{1}{2}$ ounces of powdered citric acid or 4 ounces of tartaric acid, then add 1 ounce of good oil of lime and keep turning the batch up while it is warm so as to get the ingredients well mixed while the batch is hot. Do not work it after it gets cold as that spoils the clearness and makes it streaky. Now run through the machine while quite warm so as to keep them clear and bright, you will find a high cook makes the batch a little yellow, but the blue color put in the yellow batch makes a good green (as it is the same as mixing blue and yellow color to get a green). By using green color in a high cook batch it makes a muddy dull color. So you will find the blue works best. In warm weather I find it is necessary to cook to 341 or 342 degrees. The above form will be just right for all clear drops and clear stick candy, excepting the acid and color.

Crisp Candies.

Crisp candies are a very desirable candy in all styles, and we cannot pass over it without insisting on having it very crisp and glossy. In order to obtain this special feature it will be necessary to

have your cook just right, no more or no less. We will place such as Opera Chips, Opera Curls, Shaven Twist, Jack Straws, Butter Cups, Crimps, etc., under this head. First we want a dry and high cooked batch and yet not too dry to spin nicely. The main point is to get your cook high enough to be glossy, and next, to be able to work it hot and quick, and here I must insist on your wearing gloves.

The use of Gloves.

I imagine I can see some of the older workmen smile when I recommend the use of gloves, but if we could watch these same workmen handle a hot batch, we would find that they have cooled their batch off so they can handle it with the bare hands, and the next thing they do they will cook their batch lower so they can work it when it is partly cool. Now provide yourself with a good pair of buckskin gloves and wear them till you become accustomed to using them, then you can work a hot batch while it is hot, and take a hold of it quickly and work rapidly which is the only way to get nice crisp goods such as

Opera Chips.

Opera chips which are very popular and showy goods, being glossy and thin and light in weight. They are made by taking 10 pounds of sugar and $\frac{1}{2}$ pound of glucose and water enough to dissolve

the sugar and cook to 335 degrees, and just before removing from the fire add 2 ounces of glucose and pour on marble, and as soon as it is cool enough to hold together pull it (with gloves) on the hook rapidly and add flavor, and when well pulled, twist the air out and shape it out in a very flat batch on a warm table, and start at one end of it to spin or stretch it out in a very thin strip like a ribbon, one inch wide and as thin as paper, and after you have all spun out, cut in sticks 5 inches long and put in tin cans till you wish to use it. By pulling or stretching rapidly you will be able to get it very thin and so light in weight that one pound will fill a 5 pound box when cut. By stretching all crisp candies in the above way you will be able to work them better than if you would try to spin them, and with practice you can work extra high cooks by wearing gloves and working rapidly. The 2 ounces of glucose you add just before pouring on marble will have the effect of making the batch spin or stretch better and smoother.

Jellies.

I will give a few sly hints on jellies, as I think we all need a little light on them, and they make a very nice confection when properly made. Apple, quince and apricot are the most generally used in the candy business. First we want to avoid getting a hard tough jelly. First take good greenings or

pippin apples, or white bell-flower apples, and wash and cut your apples up fine and place them in a clean copper pan and add enough water to cover the apples, then boil till they are soft (avoid cooking them too long as they become too dry and mushy), then strain or press the juice from the apples, now take 7 pounds of sugar and $\frac{1}{2}$ pound of glucose and cook to a good jelly, stirring all the time, avoid cooking to high as the jelly will become tough and runny if you cook it a little too much, and will not crystallize very good. Try a little in cold water and when it is cooked enough to form a short jelly it is done; then remove from fire and color and flavor, lemon, orange, rose or vanilla, and run in impressions in starch; have you starch well dried, as damp starch will stick to the jellies and if your cook is too low the jellies will take up the starch. You can cook jellies with a thermometer by tacking the thermometer on a paddle and then you can stir your batch and use your thermometer at the same time, 240° is a good cook for a nice rich juice, but if your juice is thin you will be obliged to cook a little higher, which you can soon tell after you have made one or two cooks or batches. Avoid leaving any of your juice remain over night unworked up as it is not so good after standing so long. After your jellies have laid in starch over night take them out and brush the starch off well and place a few at a time in a round bottom pan and dip your hands in thin syrup

and run through the jellies till they are a little sticky then throw them in granulated sugar and sieve them out and lay on trays to dry, set them with tops up, it is best to leave them lay on trays till the next morning if the weather is dry; then set them in crystal pans and cook a high crystal, say $36\frac{1}{2}^{\circ}$ on syrup gauge and let the crystal stand one hour to cool off a little, then put it on the jellies and set them in a drying room, so as to keep the crystal warm, and after they have remained in the drying room 4 or 5 hours, or till you see they have got a good crystal, then drain off the syrup and when they are partly dry knock them out and lay them on trays to dry, when they are ready for boxing.

You can make a very nice jelly for covering with chocolate by adding strawberry jam to the apple juice and cook a little lower as you will not have to crystallize them.

Quince Jellies.

You will find the juice of quinces to be a little stronger than apple juice so you will have to use more sugar, say one gallon of quince juice and 9 pounds of sugar and 1 pound of glucose, and work the same as apple. Quince is mostly liked covered with chocolate, it is also very nice with a little cocoanut cooked with it.

Apricot Jellies.

Apricot jellies is mostly made from the canned pulp and is made in the following way: Take 10 pound of apricot pulp and rub it through a sieve into a clean copper pan and add 10 pounds of sugar and cook over a slow fire, stirring it all the time, and do not let it come to a boil, continue to simmer it in this way till it gets quite short when you drop it off the paddle, then remove from the fire and run in dry starch and dust over the top of the drops with the starch, and leave them in a dry place till there is a fine crust forms on the outside of the drops or jellies, then they may be crystallized over night in a crystal cooked to 35° on syrup gauge, or they can be dipped in cream and then crystallized or covered in chocolate.

Basin Work.

Basin work at the present day has become a very difficult task, especially in very fine work, such as fine Jordan sugar coated almonds with a very thin coat. Extra thin coats require extra care so as to get them smooth and yet keep from spotting, and only those who have continual practice are the only ones who can overcome these difficulties.

Smooth Almonds.

Take 10 pounds picked Jordan almonds and brush the dust off well and place in the basin and add a little melted gum, and add a little flavor and

work them till they are dry, then add a little more gum and work till dry then place the almonds, in the dry room on trays till they are quite dry, then place them in the basin, having heat on basin and have 8 pounds of sugar cooked to a syrup of 38 degrees on syrup guage or so it will form a good thread by trying it between the thumb and finger, if this syrup is too thick it will make your almonds too rough for the first coat, and if too thin it will make too clear a coat and will not sugar or turn soon enough, and will cause the almonds to spot. You will be able to notice this after you make one or two batches. After you have your syrup cooked keep it quite warm and add a small quantity at first (so as not to wash the gum off the almonds), and when that has sugared, continue to add the syrup as fast as it sugars, not allowing your almonds to work too long, or it will wear the points. After you have a good coat or well covered up, place them in the dry room, and later in the day get one more light coat on with a trifle thinner syrup (with flavor) which ought to leave your almonds quite smooth. Now dry them off again in the dry room and then cool them off and place them in the basin again and have a little thinner syrup cold (if you wish to color add color) and add to the almonds, working them cold, and when you have a very thin coat on take them out and cover them up in trays for 3 or 4 hours, then have your basin cleaned

and waxed lightly with paraffine and beeswax by heating the wax and sprinkling on the pan, and when the wax is quite cold put the almonds in and work them till they have a fine gloss, adding a little powdered soapstone while they are working. If the wax is not cold the almonds will take up too much wax and will not glaze good.

Clear Basin Goods.

Clear goods are made by placing 20 pounds of sugar and $\frac{1}{2}$ teaspoonful of cream tartar and water in a copper pan and cook to a good crack, and pour on marble, and when cold enough to handle flavor and pull the batch partly on the hook, then run through drop machine (small round drop machine) and place in basin and have a little heat on the pan and add a little glucose (which you have thinned a little, not too thin, as it won't hold) and add enough pulverized sugar to dry the glucose, then add more glucose and more sugar till they are large enough, then remove from basin and wax the basin the same as for smooth almonds and then place the drops in the basin and add powdered soapstone and work till they are glossy. Don't have your drops too dry and sugary when you stop adding the glucose, as they will not take the wax so well.

Cream Basin Work.

Cream almonds, filberts and black American walnuts come under the above head, and we will choose cream almonds for a subject. Take 5 pounds of almonds, roast lightly, then place 2 pounds of sugar in a copper pan and add water, and cook to 242 degrees, then throw the almonds into the sugar and turn rapidly, and when they have turned remove from the fire and throw the almonds into a sieve and cook 2 more pounds of sugar to 250 degrees, then remove from fire and add almonds and turn rapidly, and when turned throw into a sieve and place 10 or 12 pounds of sugar in a clean pan, and $\frac{1}{2}$ gallon of water, $\frac{1}{2}$ teaspoonful of cream tartar, and cook to 246 degrees, then place the almonds in the basin and add a little syrup slowly, and work the basin till the sugar turns (having heat on basin) then add more syrup and flavor and continue to work the basin till the sugar is well turned, and then add more syrup and flavor, and when you have syrup on take them from basin before they get too dry, as they will turn the crystal if too dusty with sugar, and when they are cold place them in crystal pans, and crystal over night in a crystal cooked to 35 degrees on syrup gauge, in the morning you can drain them off, and when they are dry they are ready for use. Filberts are worked the same way as the almonds, and walnuts the same, omitting the roasting. For No. 1 Jordan cream

almonds, blanch the almonds and dry them and coat them lightly and flavor strong with vanilla and crystallize the same as above.

Pulled Cream Candies.

For pulled cream candies, such as mint, cream plait, and vanilla cream, and rose, lemon, chocolate, and orange: Take 15 pounds of sugar and 2 pounds of glucose and water enough to dissolve the sugar and cook the batch to 262 degrees, pour it on a cold greased marble, and when cool enough to handle put it on the hook and pull it till it is quite cold, then add flavor and when you have the flavor well pulled through the batch take it from the hook and pull out in bars or plait and leave lay on wax paper till it turns, which will soon take place if you have pulled it enough, and this batch ought to be quite soft if you have not cooked higher than 262 degrees. You can wrap it in wax paper to pile on the counter or put it in glass jars.

Crystallizing.

In the following remarks we will give a few hints on crystallizing candies for a retail confectionery. For bon-bons or dipped cream goods and cut creams, place 20 or 30 pounds of best A sugar or Mold A sugar in a copper pan and add enough water to thoroughly dissolve the sugar or enough water to start your batch to boiling at 31 degrees

on syrup gauge, or 220 degrees on thermometer, then cook to 35 degrees on syrup gauge or $224\frac{1}{2}$ degrees on thermometer, then set to one side till almost cool, then place one layer of goods in crystal pans and take a 2 quart dipper and pour the crystal syrup over the goods till they are well covered with the syrup, then set the pans on a table till morning, when you can drain off the syrup and set the pans on their sides in a trough lined with tin and let them remain this way for 3 or 4 hours or till the syrup has thoroughly drained off and the goods are dry, when they will be ready for use.

Small batches like the above can be cooked about 1 o'clock in the afternoon and it will be about cool enough by 6 o'clock to put on cream goods, such as are made out of a dry cream. For extra soft or runny cream you will have to let your crystal get a little cooler before putting it on the goods; it is best to put crystal on goods a little warm (those that will stand it), as it takes hold of the goods sooner and makes a brighter crystal; and most all cream goods will stand a warm crystal if your cream is made right; it will not hurt the goods if the syrup warms them enough to make them soft as they will set and be all right when the syrup and goods become cold. It will not be necessary to put the goods in a dry room while crystallizing if your cook is not higher than 35 or $35\frac{1}{2}$ degrees, but if your cook is 36 or 37 degrees, on syrup gauge, it is best to put the goods in a

warm place during cool weather, as the crystal will turn or get grainy when the syrup gets cold. For light crystal cook to 34 or 34½ degrees, for gum drops to 35½ degrees, and set in a moderate temperature of about 60 degrees. For jellies (see apple jellies) in this book. To soften French fruits or almond paste bon-bons, cook a syrup to 32 degrees on syrup gauge and put it on the goods warm and let set for two days when they ought to be soft and a light crystal formed on the goods.

All crystal syrup ought to be used up for other work as much as possible, as new syrup is always best for good crystallizing, and by using a little care you can always keep your syrup used up by adding a little in most any kind of a batch, such as hard candy or cream for covering with chocolate or colored bon-bons, etc.

Gum Work.

In the following we will give you a good gum drop, and if you wish it cheaper you can add more glucose and sugar. Take 12 pounds of good gum arabic (or senagol gum) and grind fine and place in a pan and add 3 gallons of water, and place on slow fire and stir till the gum is dissolved, then strain through a fine sieve into a clean copper pan (or steam jacket kettle) and add 8 pounds of sugar and 1 pound of glucose and place on fire and stir rapidly so as to keep the batch from burning on the bottom of the pan, and have your fire

hot enough to bring the batch to a boil so as to boil it clear and continue to stir till it is thick enough to drop off the paddle like jelly, allowing the fire to become more moderate. Then place the pan in a steam bath. Make the bath by taking a copper pan and fill it half full of water and place it on a slow fire, and set the pan with the batch in on the pan of water and let it steam for 2 or 3 hours to thoroughly clear up, then remove the thick scum on top and flavor and run or drop it in impressions in extra dry starch, and when cold place in dry room for 2 or 3 days, then, if hard enough, take out and dust the starch off well and place in pans and crystal over night in a crystal cooked to $35\frac{1}{2}$ degrees on syrup gauge. Leave the pans while crystallizing in a moderate place. In the morning drain the crystal syrup off of the drops and when partly dry knock out and pick them apart and leave on trays till dry, when they will be ready for use.

Gum Wafers.

A good gum wafer can be made by taking 10 pounds of gum and 8 pounds of sugar and 2 pounds of glucose and work the batch the same as gum drops, and run in thin wafer impressions in starch and sit in dry room, and when they are dry enough to handle, take them out of the dry room and take 5 pounds of the wafers out of the starch and dust them off and place them in a

clean copper pan, and dip your hand in good clean warm lard and run your hand through the wafers till they are quite bright, then take a clean cloth or paper and rub it through the wafers till it has absorbed the most of the lard, and leave the wafers clean and glossy, when they will be ready for use. You can leave the balance of the batch remain in the starch till you want to use them, when you can handle them the same way as the above.

Marshmallows.

Marshmallows are made many ways, from many different ingredients, but I find that after all there is nothing like the pure marshmallow drops made from gum arabic (or Senogal gum), the following is a very good drop for summer or winter: Take 20 pounds of gum and grind it fine and place it in a clean pan and add 3 gallons of water and place on fire or steam pan and stir till it is melted, then add 15 pounds of glucose and mix it with the gum, then strain through a number 30 sieve into a steam marshmallow mixer and add 20 pounds of white sugar, which is a little moist, then start the beater slowly and work it till the sugar is dissolved (having a little heat on the pan) then have the whites of 8 dozen of fresh eggs beaten stiff and add them to the batch, then start your machine on full speed and beat the batch up light, being careful not to beat any more than just light, as it will fall if you

work it till it gets quite stiff, now add 3 ounces of powdered vanilla bean and when it is mixed through the batch well then add 1 quart of glycerine. Just work it well through as it is liable to make your batch fall if you work it too much. Now remove your beater and dip the paste out into marshmallow droppers and drop it in impressions in clean, dry starch, and set in room where they will not be subject to steam from cooking batches, not in a warm room, but a moderate room, then let them stand one day and a half or two days, and if somewhat dry you can take them out of the starch and dust them off well and throw one layer of the drops in deep trays and cover over with fine sugar, then throw in one more layer of marshmallow drops and sugar, and continue in this way till you have your batch all in sugar. Now cover the trays up by setting one on top of each other and let set this way five or six hours till the drops moisten on the outside enough to catch the sugar, then take them out and pack them in the boxes; be sure your starch is quite dry as the drops will catch enough starch to crust them on the bottom. If the starch is a little moist use dry flavor, as the alcohol in extract will act on the eggs and give them a bad taste and odor, if your drop crusts too much you can use less sugar, but in cold weather you can use more sugar. If you want to cheapen this drop add more glucose and more eggs.

This batch can be beaten by hand in a steam bath, or it can be beaten up in a patent ice cream freezer by putting hot water in the tub around the can.

Lozenges.

Lozenges is one of the branches of the confectionery business which is not worked on in many retail confectionerys, but we will give it a brief outlining for the benefit of those who wish it. Take 4 ounces of gum tragacanth and place it in an earthen or stone bowl, and add $2\frac{1}{2}$ pints of water and let stand over night, then add $1\frac{1}{2}$ pounds of glucose to the melted gum and mix it well, then pass it through a No. 30 sieve into a clean copper pan, then add enough lozenge sugar to make a stiff paste, then place the batch on a clean marble and add flavor and color and add more lozenge sugar, so as to get the batch quite stiff, so it will cut well, leaving square, and sharp edges. Now roll it out in a thin sheet about $\frac{1}{8}$ of an inch thick then dust it with a little potato starch and rub over with the hand to smooth it up a little, then cut out the lozenges with a tin cutter and throw them on trays, which you have dusted with fine lozenge sugar, and shake the tray a little to separate the lozenges; then place them in the dry room for 1 or 2 days till they are dry, then take them out and place the lozenges in a sieve and sieve them hard so as to

wear the rough edges off, and they are ready for use.

You will find that in using the glucose in the gum it will separate the gum so you will not have to rub through an extra fine sieve like most of manufacturers do.

The Thermometer.

The subject of the thermometer is important to all confectioners, and I think all workmen ought to use them. There are some who are continually cooking one thing such as stick candy, who can almost tell when a batch is done by looking at it. Yet we often hear the remark by them: I got that batch a little too high or I got it just a trifle too low, and it may be that the same batch will be shipped a long distance and will be turned before it has been received by the buyer. Now if you use a thermometer you know just where you are all the time and you can take your batch off of the fire right on the dot every time. For this reason we recommend the use of the thermometer. Next you will have to become acquainted with the thermometer you are using, as thermometers varies some, and you will have to find that out, which you can very easily do by cooking a few batches with it.

You will notice in cooking a batch of cream to 240 degrees, that it is a little too soft to suit you, so you will have to go a little higher the next batch, and in this way you will soon become ac-

quainted with your thermometer, it is best to use one thermometer for low cooking like cream work, and one other thermometer for high cooking, as extra high cooks strains or expands a thermometer so it is not good for low cooking use. We give the following scale for a guide to those who are not acquainted with the thermometer:

The Thread, ...	228 degrees
Good Thread, ...	236 "
Soft Ball or Catch, ...	240 "
Small Ball, ...	244 "
Large or Hard Ball, ...	250 "
Slight Snaps, ...	261 "
Good Crack, ...	271 "
Hard Crack, ...	310 "
High Cook, ...	330 "
Caramel, ...	360 "

Water Iced Goods.

Water iced goods are a very pretty looking candy if properly made, and they will keep fresh for a long time.

In the following we will give a correct way of working them, but it takes a little practice to get them nice.

Take a one quart stone bowl and place one pound of extra fine lozenge sugar in the bowl, then three or four teaspoonfuls of water, then stir the sugar well, and if it is quite stiff yet, add one more teaspoonful of water and stir well, and if the icing

is thin enough to become smooth on top when you shake the bowl it is about right for use. Now take an apricot jelly and lay it in the bowl on top of the icing allowing the one side of the jelly to get iced only, then run a two prong fork under the jelly and lift it out of the icing and turn the dry side of the jelly down, and drop it on a clean tray and lift the fork off, shaking the jelly at the same time so as to make the icing run smooth on top, now continue to ice the jellies and other drops this way and leave them lay in this way till the icing has become hard enough to hold the weight of the jellies and drops which will take about five hours. Then stir your icing again, and if not stiff enough add more sugar. Now lay the uniced side of the jelly in the bowl on the top of the icing and dip out with fork and turn the top side with the hard icing down and leave them lay this way till they are hard, when they are ready for use. You can color your icing red or yellow, or orange or green color. You can dip long cream drops and drops cut out of almond paste with a lozenge cutter, and almond nougateens and quince jellies, etc., (for a stock of water iced goods).

Mold A Sugar.

The proper sugar to use in manufacturing candy is a necessary subject to look up. I would recommend Mold A sugar for all high cooked candies, and for soda water syrups and ice cream, as it is

freer from cane juice flavor than other sugars which is of some importance in ice cream and soda water. In clear drops, such as lime drops, you will be able to cook higher and yet be lighter in color and make dryer goods than other sugars. In refining mold sugars the thin syrup is drained off leaving a pure, dry sugar, free from thin syrup. In centrifugal sugars, all thin syrups are dried in the sugar, therefore it contains more molasses or thin cane juice, which, when cooked up to a high cook becomes darker than Mold A sugar will at a higher cook. You will find it will give better satisfaction in all crisp candies or pulled goods on which you want a high gloss, such as Butter Cups, Opera Curls, Jack Straws, or twist and thin chips, and in crystallizing you will find it will be more preferable for brilliant crystal and less liable to turn. The older confectioners can remember when we had nothing but Mold A sugar and we found less trouble in the business than now.

Easter Eggs.

No doubt there are a few confectioners who would like to have a short talk with us about Easter eggs, as they are troublesome goods to get nice. First we will take up the subject of coating eggs with chocolate.

Chocolate Eggs.

For dipping Easter eggs in chocolate take 5 pounds of plain liquor chocolate and 5 pounds of sweet chocolate coating and cut or break the chocolate up in small pieces and place it in a 2 gallon farina boiler and set on the fire and stir it till it is melted, then add 8 ounces of melted paraffine and stir well, then lift the pan (containing the chocolate) out of the water and set it on a table and stir till the chocolate slightly cools, then dip the egg in the chocolate and hang on the rack, have the rack in a cool place and leave them hang till the chocolate on the eggs is hard, then take the eggs down and dip in thin white shellac and hang up again and leave till quite dry. This style of coating will keep for some time without spotting, but if your chocolate coating contains fats instead of cocoa butter they will not keep so well, as good chocolate would. It is not best to have your stock made up too long a time before you wish to use them, but if you have to have your stock on hand a long time it will be necessary to use plain chocolate liquor only for dipping, and work it as cold as possible.

Cream Easter Eggs.

For the inside egg use short dry cream that will set quick, say 20 pounds of sugar and 2 pounds of glucose and water, and cook to 242 degrees and pour on marble and let get cool, then turn to a cream and need well, and melt the cream in a 3 gallon

farina boiler and flavor, then have a cream funnel or runner with a $\frac{3}{4}$ inch hole for dropping, then drop in the one half of the plaster molds (have the molds well soaked in water) and drop a small yellow cream drop on each half of the egg, for yelks, now drop cream in the other half of mold and your assistant can turn the first half over the warm half and press them slightly, and when they are cold take them out and trim them and dip in a fresh cream made in the following way:

Cream for Dipping Eggs.

Take 20 pounds of sugar and $1\frac{1}{2}$ pounds of glucose and water and cook to 239 degrees and pour on a very clean marble and leave ~~lay~~ till quite cold, then turn to a good cream and cover up and let mellow, then knead well and place some of the cream in a farina boiler and heat up hot and flavor, then dip the eggs in the cream and hang up on the rack to dry, and when they are hard enough to handle you can take them down and trim them, and they are ready for use.

Wire Hooks for Easter Eggs.

We find that a wire hook gives the best satisfaction for hanging the eggs up with. The hook can be made in the following way: Take 2 pounds of brass spring wire a little thicker than a pin and cut

in pieces 5 inches long, and shape it like a letter L with a little hook at the top of the L to hang it on the rack with. Now you can run the bottom of the L into the side of the egg near the top and dip the egg in chocolate or cream and hang it up on the rack, and when you take them down you can take the wire out of the egg and it will only leave a small mark on the egg. Your rack can be made by taking long wooden strips $2\frac{1}{2}$ inches wide and 1 inch thick, and drive small wire nails in the strips 3 inches apart, now have a wooden frame made over a table to rest the strips on, and your rack is complete.

Decorated Eggs.

You can decorate cream eggs in colors in the following way. Wet three or four small sponges in thin water colors, say one sponge in red and one in yellow, etc. Now take one of the eggs and strike the egg with the sponges, and in this way you can get a nice mottled egg in many colors, and when they are dry they are ready for use, or you can crystallize them or they can be dipped in hot paraffine, and when they are cold rub them with a cloth and they will be quite glossy and look like marble eggs. Nice landscape scenes can be made very easy by taking thin water colors and a brush and simply sketch a scene on a cream egg, the cream being moist it will blend the colors itself, and will have a very beautiful effect.

How to Avoid Waste of Material and Time.

First let us have an orderly work shop or factory, then we can talk about keeping scrap so as not to have any waste, and be able to keep our goods fresh by working up stale goods without spoiling a batch by getting too much scrap of the wrong kind for the style of goods we want to make. It is very necessary to work up stale goods as there are many goods that have almonds or cocoanut or chocolate or butter that makes the scrap valuable; if it was simply the price of sugar we might throw the scrap away and not lose much at the present price of sugar.

Orderly Work Shop or Factory.

Cleanliness about a shop is one of the rules which should be most rigidly enforced, even though you have to enforce the rule on yourself, there is no excuse for permitting piles of scraps of candy, pans, brushes, etc., to lay around on the tables and marbles, and to leave boiling pans set around on the floor in your way; neither should pans, knives, dippers, and sieves be allowed to remain sticky and dirty, and machines covered with grease and dust; tables and marbles and trays should be kept very clean so your goods do not get spoiled before they leave the factory. Use plenty of wax paper to spread over trays and goods, it will not be a loss as the goods will be much nicer and brighter.

Every thing ought to be kept in the best of order, workmen should take pride in keeping their shops as free from rubbish as possible, it is an unplesant sight to go into a factory and see a workman with a hot batch of candy under way and rummaging over the numerous pans or other tools in order to find a palate knife or some other tool which he wants to use in a hurry. Each workman should have a particular place for each tool and return it to its proper place as soon as he is done with it and in this way you can have an orderly factory.

How to Keep Scrap in a Proper Way.

How to keep scrap in a proper way is the next important thing in a factory and it can be done in the following way by having tin pans, like crystal pans, and plenty of shelf room so you can set each pan separately on the shelf; now take the scrap of each style of candy and put in separate pans, say all molasses scrap kept in one pan, and all nut scrap the same, also chocolate scrap, and all white goods and all dark goods, butter goods, all cocoanut goods separately and when there are any stale or sticky goods returned from the store throw them out on a table and separate them before you put them away.

How to Work up Scrap.

When you have your scrap in the above order it will be very easy to add a little to a fresh batch that you are cooking without spoiling the color or the taste of the goods, and you will be able to keep your stock of scrap so low that you will not have to make special batches of something all mixed up simply to use up your scrap or stale goods, and we know that batches of that kind, after all, are only scrap batches, which are not worth much, and you have lost the main thing you started out to do, you have not saved the chocolate or nuts as you intended to do, you have throwed all into a molasses batch and your material is only worth the value of molasses, which is only about 4 cents per pound; when by adding chocolate to a chocolate batch you have saved the price of chocolate also. Most workmen will think that the above plan of separating scrap will be too much trouble, but if they get in the habit of working that way they will soon forget about the trouble, it will become natural to them to handle their work that way.

All scrap that contains tartartic or citric acid should be throwed away, as the acids will not cook without burning or having a scorched acid taste.

How to Keep a Fresh Stock of Goods.

To keep a fresh stock of goods and at the same time not have any losses in stale goods is one of the most important features in the candy business. A constant stock of fresh goods is a sure road to success in the candy business. The first thing to do is to supply your store with plenty of tin cans, such as 10 pound lard buckets and 50 pound pudgy buckets with lids, which can be got for so little money that every confectioner can afford to have plenty; then do not fail to use them for all clear or hard goods, such as clear drops, crisp candy, butter cups, crisp taffies and burnt almonds. You can put a 20 or 25 pound batch of clear candy or drops in a 50 pound pudgy bucket and set it under the counter, and you can fill your pans on the counter out of the bucket as you choose. On rainy days your stock will be all right in the buckets as they will keep fresh till used, the same with butter cups, and some styles of crystallized cream goods can be kept it this way for a much longer time than in paper boxes. For cream goods have common strong paste-board boxes with muslin binding, made all one size, say 8 pound boxes, for goods that cannot bare any weight have large flat boxes $1\frac{1}{4}$ inches deep; use wax paper freely and label all boxes of goods, so as to keep them in the best of order. Box or can all goods as soon as they are cool enough; do not leave goods set around in the factory and store in trays or pans even though the

weather is cool, the dust and air is effecting the goods in some way which is not best for them. Now the next important feature will be to make small batches in cream goods so as to have them fresh, and not to get too large a stock on hand, fifty different styles of candies in 20 pound batches would make a stock of one thousand pounds which is too much for some stores to carry and keep the stock fresh.

How to Make Small Batches of Cream Goods.

In order to make small batches of cream or chocolate goods without waste of material it will require care and active work: First provide yourself with different sizes of farina boilers, say 3 pints and $\frac{1}{2}$ gallon, use agate ware for small sizes. Now have a batch of plain cream, say 20 pounds and take 2 or 4 pounds of this cream and warm it in the farina boiler, thin enough to run or drop in impressions in starch, then add the grated rind of 2 or more oranges and a little acid (if you wish it), then pour the cream in a cream dropper or funnel and drop some for covering with chocolate and some for dipping with cream; the chocolate goods can be covered plain and some with walnuts on top, the cream goods can be used the same way, in this way you can drop two or three styles out of this small batch. Then scrape out the cream which remains in the dropper and pan and put it in a

tin can, with lid, so as to keep the cream soft till the next time you want to use the same flavor. Now proceed the same way with vanilla flavor or other flavors, such as cocoanut, almond paste, etc., and for all cream bars and squares, Genesee cream or Italian creams, cream wafers, and cream work of all kinds can be worked this way, it will require a good deal of work to make a large quantity in a day, but you can have a large variety and can keep your stock fresh. I have made 15 batches this way in one day, and in all did not have more than 60 pounds of goods after they were dipped in cream and covered in chocolate. I worked this way for one year and at the end of that time, I had increased the trade so I could make my batches 3 times as large as I did the previous year. All crushed cream goods which are returned from the store can be put in tin cans and they will keep soft so they can be used in a new batch, without boiling over.

With the above I will close my remarks on the manufacturing of candy, each branch of which I think is sufficiently outlined to make the business clear to any confectioner who has had some experience in manufacturing candy, and my counsel is such as cannot help being a benefit to all experimental workmen, and I think we should all take a hand in experiments, as there is much in store for the confectioner of the future.

NOTES ON ICE CREAM.

As there are many inquiries in reference to the manufacturing of ice cream, we will choose a few special points to talk about. One very special point is the effect of sugar.

Effect of Sugar in Ice Cream.

The amount of sugar to be used in ice cream seems to many to be of very little importance, as you often hear small quantities recommended. Some use 5 ounces to a quart of cream, while others will use 6 ounces, and 7 ounces, and eight ounces at the highest. Now I recommend all you can use without making the cream too sickening sweet, as the more sugar you use the smoother and tender your cream will be, and the body will be better with much sugar than little, as for example, you will notice in water ice, 8 ounces of sugar and one quart of water frozen may be smooth when you first freeze it, if you work it fast enough, but after it stands for one hour you find it has become quite rough, but if

you use 12 ounces of sugar to one quart of water you find it much smoother, and 16 ounces will still be smoother and richer and more body, but will be too sweet to the taste without adding acid. So you can find the sugar will have the same effect on ice cream. In ice cream that you use sour fruits in, such as strawberry ice cream, you can use more sugar than in vanilla cream. If the cream is well beaten till quite stiff it will taste less sweet than cream that is soggy and watery. To prove this, taste your cream before it is fully frozen. From a strictly scientific or especially from an economy point of view this question is of vast importance to those who are trying to improve the quality of their cream by using body substance, such as starch, arrow root, gelatine, etc. If my theory be correct, it is clear that we may improve the body and richness of cream by using more sugar than is generally used by ice cream makers. It must however be remembered that we can go to the extreme and use too much sugar to suit some of our customers who differ greatly in their taste and imagination.

Hand Made Ice Cream.

Hand made ice cream has some advantages over machine cream in one particular point. While freezing and working with the paddle we allow all animal heat and air to escape, and continually beat fresh air into the cream, which improves its taste and light-

ness, and here I wish to direct attention to the importance of pure air in the room where ice cream is made. We often find ice cream manufactured in a badly ventilated cellar, where everything is musty, damp and sour, and sometimes cooking going on at the same time in the same room. The ice has the effect of drawing all gas or bad air of the room to where you are at work on ice cream, and of course the effect is bad.

How We Do It.

Take 18 quarts of good cream and place it in a pan or can and add 13 pounds of Mold A sugar and stir till the sugar is all dissolved, then strain into a 40 quart freezer and ice up strong, using plenty of salt. Now remove the lid and place a clasp on the rim on the top of the can with a thumb screw, then place an iron paddle with wooden handle (about three feet long) in the can and rest the handle against the clasp and run the can around with the paddle rapidly and as soon as it freezes cut the cream down with the paddle and continue to freeze, and cut down till you have the cream quite thick. Now re ice the can and beat rapidly till the cream gets too stiff to beat easy, then add one more quart of plain cream to loosen and soften up the cream and continue to beat till it gets stiff again, then add one more quart of plain cream and continue to beat till it is quite stiff, when the can ought to be full, then add flavor and draw the water off and re-ice and set away for use.

A 40 quart can of ice cream ought to be made in the above way in one hour and a half ($1\frac{1}{2}$) without hurrying, by holding the two quarts of cream out till the cream is near frozen does not only have the effect of loosening the cream up, but has allowed you to use 13 pounds of sugar to 18 quarts of cream, which will work it up smoother, then by adding the two quarts later it reduces the sweetness so as to make 13 pounds of sugar to 20 quarts of cream. In machine ice cream you will be able to improve the ice cream the same way, by adding some of the cream after it is beaten stiff, it will allow you to work it longer and better. You may think that 13 pounds of sugar is too much sugar for 20 quarts of plain cream, but if you have rich cream and well worked it will taste all right. One of our salesladies told me that she had some very particular customers who liked our cream better than our neighbors, because our cream was not so sweet, yet at the same time I was using 5 ounces more sugar to the quart than our neighbor.

Ice Cream Flavors.

In the following list of flavors you will be able to choose from each day to make up your bill of fare.

ICE CREAMS.

Lemon.

Orange.

Vanilla.

Chocolate.

Pistache.

Coffee.

Nutmeg.

Croquan.

ICE CREAMS.

Strawberry.	Apricot.
Caramel.	Banana.
Peach.	Pine Apple.
Bisque.	Preserve Ginger.
Tutti Frutti.	Nougateen.
Raspberry.	

WATER ICES.

Pine Apple.	Grape.
Strawberry.	Currant.
Wild Cherry.	Raspberry.
Cherry.	Ginger.
Orange.	Sweet Violets.
Lemon.	Peach.

FROZEN FRUITS.

Peaches.	Apricots.
Pine Apple.	Cherries.
Strawberries.	Mandarine Oranges.

FROZEN CUSTARDS.

Lemon Custard.	Nutmeg Custard.
Vanilla Custard.	Orange Custard.

How to Prepare Chocolate for Ice Cream.

Take 5 pounds of plain liquor chocolate and cut it up fine and place it in a farina boiler and set it on the fire and stir till it is well melted, then take 6 pounds of sugar and 1 pound of glucose and one quart of water and place the sugar, glucose and water in a copper pan and set on the fire and cook to 35 degrees on syrup gauge, or a thin syrup, then take a dipper and pour the syrup into the choco-

late in a fine stream, stirring the chocolate well all the time, and continue this way till you have all the syrup added to the chocolate, then stir the chocolate well till quite smooth, then set it away in a cool place and when you wish to use the paste in ice cream take one or two pounds of the paste and place it in a pan, and set the pan in warm water and when the paste is melted add a little cream to the paste to thin it, and then add it to the ice cream.

How to Prepare Strawberries for Ice Cream.

Pick the stems off the berries and wash them and run through a fruit crushing machine, then place them in a stone dish and add enough red color to color them a bright red, and leave set this way for one hour, when you can add the berries to the ice cream, which will color the cream a light pink color, and the berries will show up through the cream like bright red crushed berries.

Peaches for Ice Cream.

Prepare the peaches the same way as the strawberries, (excepting the color), add a little red and yellow color to make a nice rich peach color.

Cost of Ice Cream.

There seems to be many inquiries for cheap or artificial ice cream, for this reason I give the following figures, which I copy from my book of accounts for one month's business, and the cost of material used :

1040 quarts of plain cream, at 18 cents per quart, ...	\$187 20
(cream stood 80 and 85 per cent cream),	
15 tons of ice, at \$4.00 per ton, ...	60 00
50 bushel of salt, at 30 cents per bushel, ...	15 00
696 pounds of mold A sugar, at 4½ cents per pound, . .	31 28
30 quarts of strawberries, at 15 cents per quart, ...	4 50
30 " " " 10 " "	3 00
20 pounds of chocolate, at 23 cents per pound, ...	4 60
4 pounds of vanilla bean, at \$7.00 per pound, ...	28 00
	\$333 58

The above material made 2114 quarts of ice cream, and we find by the above figures that the ice cream cost a little over 15 cents per quart for material, which is very cheap for good ice cream, and shows very clearly that there is no use making artificial ice cream to lessen the cost, when pure cream can be made at the above cost, and can be handled with a good profit in any part of the country.

Age of Cream.

One more point I wish to call your attention to, is the age of cream which is very important, cream ought to be 4 or 5 days old (after it is sep-

arated from the milk) before it is used for ice cream, this age improves it in body richness and smoothness, you can very easy test this point by working up part of a fresh can of cream and leave the balance stand 4 or 5 days before working it up in ice cream. We have one dairyman who never ships his cream till it is 4 day's old, and I know of one creamery that has a reputation for very good cream, and one of his workmen says he holds his cream till it is 10 day's old before he ships it, now this seems a long time to hold cream, but if it is kept in a good can and in a low temperature it can be done. One more point to watch is to see that you get fair measure, it is a common practice among the drivers of milk wagons to pour cream from one can to the other and in this way they swell the cream so that 18 quarts will fill a 20 quart can, and when you freeze it into ice cream you find it hard work to beat it up into double quantity. Cream should be sold in dry measure which is the common rule in dairies ; all buyers of cream should have a testing glass, so as to know what grade of cream you are using, most any kind of a glass that will hold about 4 ounces would do to test with, fill your glass with cream and set in the ice box over night, and you can see how much milk your cream contains, as it will separate by morning, leaving the milk at the bottom of the glass and the cream on top.

Boiled Cream.

Boiled cream for ice cream is liked in some parts of the country, while the trade is different in other places and you would not be able to sell boiled cream as your trade would want plain cream only. The best way to boil cream is to have a quick fire, or steam if you can have it is better, as it is quicker to get a boil on a steam jacket pan than a pan set on a fire, but if you have to use a fire get it up to a good heat, then set your pan on the fire and pour 4 or 5 quarts of cream in the pan and let it come to a boil, then add the balance of the cream gradually so as not to check the boil too much, as you can avoid curdling the cream in this way (if you was to put 20 quarts of cream in a pan and set it on the fire and wait till it boiled it would be liable to separate and curdle if the cream was not just in good order). After you have let the cream come to a good boil, remove from the fire and set the pan in cold water and stir the cream till it cools off, then put it away in the ice chest till the next day when it will be old enough to use for freezing and will have a better body by setting over night; freeze the same as any other cream; be sure and stir the cream till it cools so it will have the effect of letting all animal or cook taste to evaporate, and will taste better and there will be no thick scum form on the top of the cream, which is the case when you allow it to cool without stirring.

How to Make Water Ices.

Water ices are always best when made from fresh fruits in their season, such as peaches, grapes, currants, berries, cherries, pineapples, lemons and oranges. For winter use we find currant, grape and cherry juice are the most popular. Cherry and grape juice boiled in bottles and kept till 2 or 3 years old are good stand bys and are handy for use. The following formula we find gives the best satisfaction: Take 6 quarts of water and add 2 quarts of fruit juice (new or bottled) and add enough sugar to make a syrup of 20 degrees strength (cold) with the syrup gauge; now put one pound of glucose in a pan and warm it a little and then mix with the syrup and add enough citric acid to make the syrup a little tart, then color to suit the fruit you are using (red or yellow or orange), and freeze all to a stiff ice, when it is ready for use. If you wish to use the water ice for molding or decoration, make your syrup weaker as the richness of the sugar will cause it to melt much sooner. For orange or lemon ice, proceed the same way, only adding the grated rind and strain before freezing.

How to Make Frozen Fruits.

Frozen fruits can be made the same as the above water ice, by making a syrup the same strength with sugar, glucose, water and the juice off of your canned fruit, and freeze it quite stiff, then add your fruit and work it through the ice so as not to crush it

too much, peaches, apricots and pineapples can be cut in small pieces and color peach, light pink; and apricot, yellow; cherries, red; etc.

How to Make Frozen Custards.

In frozen custards I would advise using good cream instead of milk, as is generally used: Take 4 quarts of cream and bring it to a boil, with 2 pounds of sugar, when cold add 6 eggs well beaten, and freeze same as ice cream and flavor, those who do not like the eggs uncooked can boil them with the cream.



NOTES ON SODA WATER.

Soda Water.

We do not feel like closing this book without having a little talk about the soda water business, as most confectionerys have soda water fountains, and we believe that there is a bright future for the soda water and root beer business in America, and not only in America, but Europe also, for I have been told by one who knows, that Charles Hires' Root Beer Extract is sold very extensively in England. And that soda water is becoming more popular in Europe. And we know that America has the lead on all other countries for good mild drinks like soda water, and the next necessary thing to do is to keep our fountain up to the advancing times; soda water and everything that is used in making up the numerous drinks should be the purest the market affords; as good soda water is not a bad thing for health or taste, and we should spare no pains in obtaining the best of fruits and juices and every thing our business requires to make good soda water;

and here we wish to bring up a few points to enable you to have a fresh stock of syrups daily. We would advise you to use fresh fruits in season for syrups, which can be done simply by crushing the fruit with some sugar and adding a little water to thin the syrup and continue to stir the syrup till the sugar is thoroughly dissolved, then add a little citric acid if the fruit has not made the syrup tart enough, and color and strain through a cloth, and the syrup is ready for use. I would not advise use of gum foam as it always has an unpleasant taste and does not put any life in the soda water, it only makes a foam, which is flat as soap suds.

High Charged Soda Water.

It is best to have your soda water charged to an extra high pressure, then you can get a good foam on a glass of soda water, and your soda water will have more life and a better taste than if you used gum foam; but if you wish to use it you will find the following the best formula you can use.

Gum Foam.

Place 2 quarts of alcohol in a large glass jar, then add 2 quarts of water, 1 quart of glycerine and mix well together, then add 2 pounds of ground soap bark and shake well and let stand 7 days, then strain and filter, and it is ready for use; one ounce to one gallon of syrup is sufficient to make a foam.

Fresh Stock of Syrups.

In order to have a fresh stock of syrups daily, where your daily sales are small, it is best to work on the following plan: Have one or two gallon glass jars with large openings at the top and then mix your syrups as you want to use them, by placing 5 pounds of sugar in a jar and add a half gallon of water and flavor, such as orange, lemon, etc., and add enough citric acid to make it a little tart, then add the color and stir the syrup with a small wooden paddle till the sugar is dissolved, when it will be ready for use.

Fruit Syrups.

For fruit syrups made from bottled juice, take a glass jar and place 7 pounds of sugar in it and add half a gallon of water and one quart bottle of fruit juice, and a little citric acid to make the syrup a little tart, then add color and stir the syrup till the sugar is dissolved, when it is ready for use,

On this simple plan you can keep your stock down to suit your daily business, and always have a fresh stock.

Lemon Phosphate.

Lemon phosphate can be made by taking 5 pounds of sugar and place it in a glass jar and add half a gallon of water and stir till the sugar is all dissolved, then add 3 ounces of solution of acid of

phosphate and enough citric acid to make the syrup quite sour, then add extract of lemon or the grated rind of 6 lemons and strain through a cloth, and it is ready for use.

Fruit Phosphates.

Fruit phosphates can be made by placing 8 pounds of sugar in a glass jar and add a half gallon of fruit juice and one quart of water and enough citric acid to make it quite tart, then color and stir till the sugar is dissolved, and it is ready for use.

Chocolate Syrup.

Chocolate syrup can be made by taking one pound of chocolate paste (made the same as is described in notes on ice cream in this book) and place it in a copper pan and add 6 pounds of sugar and half a gallon of water, and place on the fire and let come to a good boil, then stir well and when it has cooled off it is ready for use. After this syrup stands in the fountain for a short time, the butter that the chocolate contains will raise to the top of the syrup, but the syrup will be sufficiently flavored with the chocolate for use.

How to Keep a Large Fountain Stocked.

How to run a large fountain without loss of stock by souring of syrups, etc., is a very difficult thing to do, most soda water men kill everything with preserving acids and cooking of syrups, etc. Now I have run a very large fountain with cold syrups in the following way: First take an empty glucose barrel, set on end, having the head out, now bore two holes $1\frac{1}{4}$ inches in diameter in the barrel near the top opposite each other, now put a broom handle through the holes, then place a paddle in the barrel about 6 feet long and tie it to the broom handle, now fill the barrel half full of water or 30 gallons of water and 300 pounds of sugar, then work the paddle back and forwards so as to stir the water and dissolve the sugar, and continue to work this way till the sugar is all dissolved, then insert a syrup gauge in the syrup and if the syrup is 31 or 32 degrees strong it is about right, or if you want it thicker add more sugar, and work the paddle till it is thoroughly dissolved (the thicker the syrup the longer it will keep without souring). Now when you run out of your syrup flavors you can take one gallon of this simple syrup and place it in a two gallon glass jar (or bottle with a large opening at the top), and add your fruit juice and citric acid and it is ready for use; in this way you can have a large stock of simple syrup on hand and you can mix flavors as fast as you need them and will be able to keep a big fountain running without making

former preparation, and can keep your syrup stock down to any quantity you will use for one day's sales, and can avoid having a loss of sour syrups. I recommend the use of cold syrups because I believe it is much better than cooked syrups, and I would advise the use of Mold A sugar in making syrups. I have kept a fountain running on the above plan where there was three and four thousand glasses of soda water sold in one day and was able to keep it running with ease. In order to have a large stock of sweetened cream to use in the fountain you can work on the above plan by placing the cream in a large can and add the sugar and stir till the sugar is dissolved, when it is ready for use.

List of Syrups.

In the following we will give a list of syrups which you can choose from to make up your stock from :

Lime.	Peach.	Apple.
Vanilla.	Plum.	Violet.
Lemon.	Ginger.	Cherry.
Orange.	Raspberry Vinegar.	Wild Cherry.
Red Orange.	Blackberry “	Nectar.
Coffee.	Sarsaparilla.	Cocoanut.
Sherbet.	Red Currant.	Marshmallow.
Raspberry.	Grape.	Pistache.
Strawberry.	Quince.	Nutmeg.
Blackberry.	Prune.	Teaberry.
Cranberry.	Apricot	Pine Apple.

PHOSPHATES

Pear.	Celery.	Crab Apple.
Orange.	Strawberry.	Cherry.
Lemon.	Egg.	Grape.

Plain Lemonade.	Strawberries and Cream.
Egg Lemonade.	Crushed Strawberries and Whipped Cream.
Lemonade Soda.	Chocolate and Cream Soda.
Ice Cream Soda.	Mint and Cream Soda.
Peaches and Cream.	Root Beer.

MINERAL WATERS

Vichy.	Geyser.	Deep Rock.
Appolinaris.	Hunyadi.	Plain Soda.
Hot Clam Broth.	Hot Beef Tea.	
Hot Chocolate.	Hot Coffee.	Hot Tea.

Root Beer Syrup.

For making a syrup to use with a soda fountain take one gallon of simple syrup and add 5 ounces of Hires' Root Beer Solution and mix well and use the same as other syrups.

In running the beer in a soda water fountain, we would suggest, as most soda water is charged very high, to each pint of syrup add $\frac{1}{2}$ pint of plain water, and in dispensing use $\frac{1}{4}$ of a glass of this, filling it with the soda water, which should be drawn lively so as to have the syrup well mixed. This will give you a mild and delicious beer. Dispense it cold.

For charging and running the beer direct from the fountain, dissolve $5\frac{1}{2}$ pounds of sugar in 7 gal-

lons of water, then add 5 ounces of the solution. Mix well, place in a 10 gallon fountain and charge to 80 degrees. As the beer draws quite foamy it is well to have some of the plain beer mixed in a separate vessel, or it can be kept in one of the syrup holders, and in dispensing, fill the glass one-third full of this and draw the glass full lively from the fountain.

Root Beer by Fermentation.

Take one pint of the solution (Hires'), 20 pound of sugar (Mold A is preferable), 20 gallons of pure fresh water (luke warm is preferable). 2 pints of yeast, or 3 cakes of compressed yeast. (When made in the winter time, double the quantity of yeast should be used).

The Way To Do It.

Dissolve the sugar thoroughly in the water, then add the Root Beer Extract and the yeast. (If cake yeast be used, it should first be dissolved in a little water, then it will mix more readily with the beer). Stir until thoroughly mixed, and bottle in strong bottles or jugs, corking and tying the corks in securely, or it may be placed in tight kegs, so that the gas may not escape. Set away in a place of even temperature. It will be ready to drink after being bottled ten or twelve hours, but will open more effervescingly if allowed to stand three or four

days. Before opening the bottle place it on ice, or in a cool place for a short time, when it will be sparkling and delicious.

To make the beer more cheaply, molasses or common sugar may be used to sweeten it.

Fruit Juices.

I would like to give a brief direction on putting up juices, and yet I do not want to tire you with formulas for preserving fruit, etc., as is generally done by writers, I simply want to make plain how easy you can put up your own juices for soda water or ice cream or candy use, the following is the very best way to put up juices: Grind the fruit through a cider mill, then press the juice off like cider (for berries use straw in the press) then bottle, cork and tie the corks down well, then have a large tin boiler like a wash boiler with straight sides up and down, a good size is 22 inches in diameter and 15 inches in height. Now put a wooden slat rack in the bottom of the boiler, then place the bottles of juice in the boiler (which will hold about 30 bottles) and fill with water near to the top of the boiler, only leaving part of the necks of the bottles above the water, then place the boiler on the fire and allow the water to boil $\frac{3}{4}$ of an hour after the water has come to a good boil, then remove from the fire and let stand a few minutes, then dip or draw the water off from the bottles and allow the bottles to

remain in the boiler till they have cooled off a little, then set them out on a table and after the bottles have become cold enough to handle dip the tops in hot wax and then dip in cold water to cool the wax; now you can lay them down on their sides in a cool place and leave till you wish to use the juice. Those who have steam jacket pans can put a wooden rack in the pan and boil the juice in bottles the same way as the above or you can have a wooden trough made with a coil of steam pipes in the bottom and a slat rack laid on top of the coil of pipes and work on the above plan. In this way you can boil 150 at one boiling. Do not use any sugar in your juices as the sugar will make the juice taste like preserved fruit and will not have so good a flavor as the plain juice will. I prefer the boiling process for keeping juice, as all juices that are put up with salicylic acid loses its flavor, or is preserved to death in order to keep it.



The Window and Counter.

Before we close we would like to say a few words on the subject of window dressing and counter and show case, for the factories benefit, as the factory is a big sufferer from the windows, owing to the large quantity of spoiled goods that has been on show in the windows and are returned to the factory to be worked up into fresh goods. Now we should have some reform on this line of action as the factory has enough to do to work up its own scrap and necessary stale goods from the counter, but when we are obliged to receive a large quantity from the window it is too much to work up properly and the consequence is spoiled batches in color and taste. Now this is all wrong, but to dress the window is a very necessary thing to do, and here I would like to make a few suggestions: First thing to do is to keep the quantity down to a few dishes or trays with one layer on each dish only. A nice tray can be made by any box maker in the following style: have a tray 9 inches long 7 inches wide

with sides or rim $\frac{1}{4}$ inch high, made out of extra heavy paste board or wood, and then cover the tray with white paper, and cover the rim with gold leaf paper, then lay a wax paper in the bottom of the tray and it is ready for use for the window or counter or show case; 30 trays of the above size will just fill a 6 foot show case and you can pile two styles of candy on each tray, which will just make 60 styles of candy in one case for the window; you can lay one layer of bon-bons on each tray and in this way you can make a nice show, and can change it easy and keep the main point in view, that is, not to have too large a stock on hand to get stale. In dressing windows you should be as original as possible and not have any one style longer than one day if possible, and it can be done very easy by having your window arranged so as not to take many goods to fill it. The floor of a window made in an L shape is a good plan, then you can walk into the window much better and can change it very easy, and if you only leave the goods in the window one day you can sell them the next day, and in this way you will not have so many stale goods on hand. One reason for being original and changing often is that people are always looking for something new in your window and will never pass the neighborhood of your store without stopping to look in your window; most any person can think of some new style or plan to fix up the window on each day. I will just mention a

few ways that will look well. One very nice way is to have your window dressed all in white and have all white goods, such as white cream goods with nuts on top of each bon-bon, then cream mint plait and cream vanilla bars and crisp candies in white, such as Jack Straws and Chips, and Crimps, and a bouquet of white flowers between the trays or dishes, either artificial or natural will do, and the next day dress the window all in pink, and pink candies only, and the next day everything in violet and continue in this way with chocolate goods and nut goods.

And it is a good idea to dress your window to suit different days, such as Fourth of July, dress up in patriotic colors; and for a May Day have May apple plants growing in pots, and make May apple candy, flavor with May apple or extract of banana. Have something appropriate for each holiday, such as St. Patrick's Day have your window dressed in green and green goods, and for fall, have fall scenes with autumn leaves and autumn fruits; winter, with winter scenes and Christmas scenes, such as imitations of snow, with green spruce, etc. With these simple suggestions we will close.



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